

BORON BY CURCUMIN METHOD**SM 4500-B B-2000 (21st Edition)****ADDITIONAL QC REQUIREMENTS FOR THIS METHOD:** *Certified or Accredited laboratories using this method are assessed to applicable requirements of SM 1020 and SM 4020.*

Facility Name: _____ VELAP ID: _____

Assessor Name: _____ Analyst Name: _____ Inspection Date: _____

Relevant Aspect of Standards	Method Reference	Y	N	N/A	Comments
------------------------------	------------------	---	---	-----	----------

Records Examined: SOP Number/ Revision/ Date _____ Analyst: _____

Sample ID: _____ Date of Sample Preparation: _____ Date of Analysis: _____

Were samples collected in Polyethylene, Fluoropolymer, or Quartz containers?

40 CFR 136
Table 1IWere Non-Potable Water samples acidified to a pH < 2 with HNO₃?40 CFR 136
Table 1I

Were Non-Potable Water samples held for no longer than 6 months?

40 CFR 136
Table 1I

Was the filter photometer or spectrophotometer used at 540 nm, and did it have a 1 cm light path?

SM 4500-B
B-2000 2.a

Were all reagents stored in polyethylene or boron-free containers?

SM 4500-B
B-2000 3

Was the Anhydrous Boric Acid kept tightly stoppered to prevent entrance of atmospheric moisture?

SM 4500-B
B-2000 3.a

Was the stock Boron Solution composed of 571.6 mg Anhydrous Boric Acid in 1000 mL distilled water?

SM 4500-B
B-2000 3.aWas the Curcumin Reagent composed of 40 mg finely ground Curcumin+ 5.0 g oxalic acid+ 4.2 mL concentrated HCl in 100 mL 95% Ethyl Alcohol (**OR** 100 mL 95% Isopropanol)?SM 4500-B
B-2000 3.c

Was the Curcumin Reagent stored in the refrigerator for not longer than several days?

SM 4500-B
B-2000 3.c

Were the working calibration standards prepared by adding 4.0 mL of Curcumin Reagent to 1.0 mL of standards followed by allowing the standards to float in a water bath at 55 ± 2°C for 80 minutes?

SM 4500-B
B-2000 4.b

Notes/Comments:

BORON BY CURCUMIN METHOD **SM 4500-B B-2000 (21st Edition)**
ADDITIONAL QC REQUIREMENTS FOR THIS METHOD: *Certified or Accredited laboratories using this method are assessed to applicable requirements of SM 1020 and SM 4020.*

Relevant Aspect of Standards	Method Reference	Y	N	N/A	Comments
After the water bath, were standards allowed to cool to room temperature followed by the addition of 10 mL 95% Ethyl Alcohol (or Isopropyl Alcohol) while stirring until the red color completely dissolved?	SM 4500-B B-2000 4.b				
Were samples treated in the same way as calibration standards in 4.b?	SM 4500-B B-2000 4.c				
Were photometric readings taken within 1 hour of drying the samples?	SM 4500-B B-2000 4.b				
Were samples containing greater than 1.00 mg B/L diluted with distilled water prior to drying?	SM 4500-B B-2000 4.c				
If final sample solutions were turbid, were the sample solutions filtered through filter paper (Whatman no. 30 or equivalent)?	SM 4500-B B-2000 4.c				
If low-level samples (50µg to 200 µg) were analyzed using a visual estimation by visual comparison against calibration standards, were the results reported as estimated? (SM 4500-B B-2000 4.d)	2003 NELAC 5.5.10.3.2.f				
If high hardness or cation interference was an issue, were samples pipetted into a column containing a strongly-acidic cation exchange resin at a rate of about 2 drops/second prior to treatment?	SM 4500-B B-2000 4.e				

Notes/Comments: